With this amendment, claims 1-99 are pending. No claims have been cancelled, amended or added.

Preliminary Issues:

In the Action, independent claims 78, 79, 87 and 94 are rejected under 35 USC 103(a) as being unpatentable over Allen in view of Narendran. Applicants respectfully submit that the stated grounds for rejection of claims 78, 79, 87 and 94 on pages 16-19 of the Action make no mention of Narendran disclosing or suggesting of any of the elements of claims 78, 79, 87 and 94. To the extent that the Examiner intended to reject claims 78, 79, 87 and 94 as obvious in light of Allen only, further clarification is requested in order to afford the Applicants their statutory right to respond in kind. Applicants respectfully assert that until such clarification is made, the next Action cannot be made final.

Rejection of Claims 1-27:

On page 2 of the Action, claims 1-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allen in view of Narendran. The rejection of such claims on this basis is respectfully traversed.

Claim 1 states:

"A distributed processing computer apparatus for use in systems, the apparatus comprising:
a plurality of processes executing on at least one processor;
at least one application executing in a pure distributed mode where said application is distributed in an active condition among more than one of said processes on said processors;
a system controller for controlling system activation and initial load distribution;

a router for providing communications between at least one said application and other applications independent of application locations;

an ADSM for providing distributed functionality in said application; and

an ALDM for distributing incoming events to said application."

The Action provides that "Narendran discloses a server system for processing client requests received over a communication network including: an ADSM for providing distributed functionality in said application..." Therefore, the Action claims that one of "ordinary skill in the art at the time the invention was made would have found it obvious to combine the teachings of Allen and Narendran to include a distribution functions to distribute incoming documents to applications allowing the document to be evenly distributed among the applications." Applicants respectfully disagree.

As is well-established, to make a prima facie rejection of obviousness under 35 USC 103(a), the prior art reference (or references when combined) must disclose or suggest all the claim limitations or elements. See MPEP 2143.

Applicants respectfully disagree with the assertion in the Action, "Narendran discloses a server system for processing client requests received over a communication network including: an ADSM for providing distributed functionality in said application..."

Elements of claim 1 comprise "at least one application executing in a pure distributed mode where said application is *distributed in an active condition among more than one* of said processes on said processors...", and "an *ADSM* for providing distributed functionality *in said application*..."

Narendran discloses a server system that implements distribution functions on "redirection servers" which use a "redirection mechanism" to "determine which document server should service a particular request" (col. 4, 40-67). While Narendran may disclose a server

system that has distribution functionality in the form of a "redirection mechanism", this *functionality only resides on redirection servers*. Claim 1 states that the application containing the "ADSM for providing distributed functionality" is "*distributed... among more than one* of said processes on said processors..." Applicants respectfully submit that Narendran fails to disclose or suggest of a distributed application with an ADSM that resides *on more than just the redirection servers*. Accordingly, Applicants respectfully submit that Narendran does not disclose or suggest an ADSM for providing distributed functionality in said application.

Insofar as Narendran fails to disclose of a *distributed application* with an ADSM to provide distributed functionality, Narendran fails to disclose or suggest at least this element of claim 1. Therefore, for at least the foregoing reasons, it is respectfully requested that the Examiner withdraw rejection of claim 1.

Applicants note that claims 2-27 depend from patentable base claim 1. Accordingly, in addition to any independent bases for patentability, Applicants respectfully submit that claims 2-27 are patentable over the cited references by virtue of at least this dependence. Thus, Applicants respectfully request that the 35 U.S.C. 103(a) rejection of claims 2-27 be withdrawn.

Rejection of Claims 28-74:

On pages 3 and 4 of the Action, claims 28-74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allen in view of Narendran. The rejection of such claims on this basis is respectfully traversed.

Claim 28 states:

"A fault tolerant computer apparatus for use in systems, the apparatus comprising:

a plurality of processes executing on at least one processor;

at least one application executing in a pure fault tolerant mode where said application is in an active condition on one said process and in a standby condition on another said process on said processors;

a system controller for controlling system activation and failure recovery;

a router for providing communications between at least one said application and other applications independent of application locations; and

an ADSM for providing fault tolerant functionality in said application and wherein said application is represented by a single resource set."

The Action provides, "Narendran discloses a server system for processing client requests received over a communication network including: an ADSM for providing fault tolerant functionality in said application..." Therefore, the Action claims one of "ordinary skill in the art at the time the invention was made would have found it obvious to combine the teachings of Allen and Narendran to include a distribution and fault tolerant functions to distribute incoming documents to applications allowing the document to be evenly distributed among the applications." Applicants respectfully disagree.

Elements of claim 28 comprise "at least one application executing in a pure fault tolerant mode where said application is *in an active condition on one said process* and in a *standby condition on another said process*...", and "an *ADSM* for providing fault tolerant functionality *in said application* wherein said application is *represented by a single resource set*..."

Narendran discloses a server system to "provide for fault-tolerance and graceful degradation of performance *through replication*" (col. 4, 30-35). Applicants respectfully submit that fault-tolerance through replication does not disclose or suggest of a fault tolerant mode

where an element of the application is *in active condition on one said process and in a standby condition on another said process*. Furthermore, Narendran fails to disclose or suggest that the said application is *represented by a single resource set*.

Insofar as Narendran fails to disclose an ADSM for providing fault tolerant functionality in said application wherein the application is in an active condition on one said process and in a standby condition on another said process and fails to disclose that said application is represented by a single resource set, Narendran fails to disclose or suggest at least this element of claim 28. Therefore, for at least the foregoing reasons, it is respectfully requested that the Examiner withdraw rejection of claim 28.

Claim 48 includes similar elements to claim 28. In particular, claim 48 contains the elements of an application executing in a fault tolerant mode where "said application is *in an active condition on- one said process* and in a *standby condition on another said process*..." Accordingly, claim 48 is patentable for reasons analogous to those presented for claim 28. Therefore, for at least the foregoing reasons, it is respectfully requested that the Examiner withdraw rejection of claim 48.

Applicants note that claims 29-74 depend from patentable base claims 28 and/or 48. Accordingly, in addition to any independent bases for patentability, Applicants respectfully submit that claims 29-74 are patentable over the cited references by virtue of at least this dependence. Thus, Applicants respectfully request that the 35 U.S.C. 103(a) rejection of claims 29-74 be withdrawn.

Rejection of Claims 75-77:

On pages 13-16 of the Action, claims 75-77 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allen in view of Narendran. The rejection of such claims on this basis is respectfully traversed.

Claim 75 states:

> "A distributed processing computer apparatus for use in systems, the apparatus comprising:
> a plurality of processes executing on at least one processor;
> at least one application executing in a pure distributed mode where said application is distributed in an active condition among more than one of said processes on said processors;
> a system controller for controlling system activation and initial load distribution;
> a router for providing communications between at least one said application and other applications independent of application locations;
> an update module for providing distributed functionality in said application; and
> a load distributor for distributing incoming events to said application."

The Action provides, "Allen discloses a distributed processing, computer apparatus for use in systems, the apparatus comprising... a router providing communications between at least one said application and other applications independent of application locations..." The rejection of claim 75 on this basis is respectfully traversed.

Allen discloses the use of industry standard interfaces such as R-232 for communications between "loosely coupled computers" (col. 5, 8-27). The router as described in claim 75 is "for providing communications between at least one said application *independent of application locations*." The type of communication interface may vary based on the location of an application. Thus, the ability to communicate with other applications *independent of location* implies that a functionality provided by the router is the ability to route communications over a

plurality of types of communication interfaces. Accordingly, Applicants respectfully submit that Allen fails to disclose or suggest a router with the functionality described in claim 75.

Additionally Narendran does not disclose or suggest a router for providing communications between at least one said application and applications *independent of application locations*. Therefore, Applicants respectfully submit that Allen and Narendran fail to disclose or suggest all the elements of claim 75.

Thus, in summary, Applicants respectfully submit that Allen and Narendran fail to disclose or suggest each and every element of, e.g., rejected claim 75. Therefore, for at least the foregoing reasons, it is respectfully requested that the Examiner withdraw rejection of claim 75.

Claim 76 & 77 include a similar element to claim 75. In particular, claims 76 & 77 contain the element of "*a router for providing communications between at least one said application and applications independent of application locations*." Accordingly, claims 76 & 77 are patentable for reasons analogous to those presented for claim 75. Therefore, for at least the foregoing reasons, it is respectfully requested that the Examiner withdraw rejection of claims 76 &77.

Rejection of Claim 78:

On page 16-17 of the Action claim 78 is rejected under 35 U.S.C. 103(a) as being unpatentable over Allen. The rejection of claim 78 on this basis is respectfully traversed.

Claim 78 states:

> "A fault tolerant, distributed processing, computer apparatus for use in systems, the apparatus comprising:
>
> a plurality of processes executing on at least one processor;
>
> said processes executing an application in the same mode as at least one other application or in a mode different from said one other application, said same and different modes being:

a) a pure distributed mode where an application is distributed among said processes in an active condition;

b) a pure fault-tolerant mode where an application executes in at least one process in an active condition and in at least one process in a standby condition; and

c) a distributed fault-tolerant mode where an application is distributed on multiple processes in an active condition and on at least one process in a standby condition."

The Action provides, "Allen discloses a fault tolerant, distributed processing, computer apparatus for use in systems, the apparatus comprising... c) a distributed fault-tolerant mode where an application is distributed on multiple processes in an active condition and on at least one process in a standby condition..." In response, Applicants respectfully traverse the basis for such rejection.

Allen discloses "process-group pairs" which contains "a primary process group and an alternate process group in an Active/Standby paired relationships" (col. 6, 10-42). Further, the terms "process-group pairs" and "paired relationships" implies only a *one-to-one relationship* of active and standby process groups.

Claim 78 states that "an application is distributed on *multiple processes* in an active condition and *on at least one* process in a standby condition." Applicants respectfully submit that Allen fails to disclose or suggest a mode where an application is distributed *on multiple* processes in an active condition and *on at least one* process in a standby condition.

Insofar as Allen fails to disclose a distributed fault-tolerant mode where an application is distributed on multiple processes in an active condition and on at least one process in a standby condition, Applicants respectfully submit that Allen reference fails to disclose or suggest at least these elements of claim 78.

Thus, in summary, Applicants respectfully submit that Allen fails to disclose or suggest each and every claim element of, e.g., rejected claim 78. Therefore, for at least the foregoing reasons, it is respectfully requested that the Examiner withdraw rejection of claim 78.

Rejection of Claims 79-93:

On pages 17-18 of the Action, claims 79-93 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allen. The rejection of such claims on this basis is respectfully traversed.

Claim 79 states:

> "A method in a computer apparatus for fault tolerant and distributed processing of at least one application in a plurality of processes running on at least one processor, the method comprising the steps of:
> executing said application in a distributed fault tolerant mode wherein said application is distributed in a active condition among more than one of said processes on said processors;
> providing a plurality of resource sets as units of distribution of said application; and
> a master critical resource set modifying shared data in said application and updating to a shadow resource set of said application on said processes and an active non-critical resource set modifying private data in said application and updating to a standby resource set of said application on another said process."

The Action provides, "Allen discloses a method in a computer apparatus for fault tolerant and distributed processing of at least one application in a plurality of processes running on at least one processor, the method comprising the steps of... providing a plurality of resource sets as units of distribution of said application..." In response, Applicants respectfully traverse the basis for such rejection.

Allen discloses a process group which "contains software processes that *depend upon a set of resources* common to the process group" (abstract, col. 4, 8-22). Further, Allen provides,

"depending upon a common set of resources, processes within a process group share a *fault recovery strategy*" (abstract).

Applicants respectfully submit that dependence upon a set of resources common to the process group does not disclose or suggest of a plurality of *resource sets as units of distribution*. As mentioned above, Allen provides that process groups depend upon a common set of resources for a *fault recovery strategy* and *not for units of distribution*. Therefore, Allen fails to disclose or suggest of a plurality of resource sets as *units of distribution*.

Insofar as Allen does not disclose a plurality of resource sets as units of distribution, Applicants respectfully submit that Allen fails to disclose or suggest the elements of claim 79.

Thus, in summary, Applicants respectfully submit that Allen fails to disclose or suggest each and every element of, e.g., rejected claim 79. Therefore, for at least the foregoing reasons, it is respectfully requested that the Examiner withdraw rejection of claim 79.

Applicants note that claims 80-93 depend from patentable base claim 79. Accordingly, in addition to any independent bases for patentability, Applicants respectfully submit that claims 80-93 are patentable over the cited references by virtue of at least this dependence. Thus, Applicants respectfully request that the 35 U.S.C. 103(a) rejection of claims 80-93 be withdrawn.

Rejection of Claims 94-99:

On pages 18 & 19 of the Action, claims 94-99 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allen. The rejection of such claims on this basis is respectfully traversed.

Claim 94 states:

> "A method in a computer apparatus for fault tolerant processing of at least one application in a plurality of processes running on at least one processor, the method comprising the steps of:
> executing said application in a fault tolerant mode wherein said application is in a active condition on one process and is in standby condition on another said process on said processors;
> representing said application by a single resource set; and
> an active single resource set modifying private data in said application and updating to a standby resource set of said application on another said process."

In the Action, the stated position is that "Allen discloses a method in a computer apparatus for fault tolerant processing of at least one application in a plurality of processes running on at least one processor, the method comprising the steps of... an active resource set modifying private data in said application and updating to a standby resource set of said application on another said process..." In response, Applicants respectfully traverse the basis for such rejection.

Allen discloses of process-group pairs in Active/Standby relationships which may correspond to an active resource set. See Allen, column 4, lines 8-22 and column 6, lines 10-42. However, Allen *makes no mention of private data being updated or modified by a process-group in an Active state*. Furthermore, Allen fails to disclose or suggest the updating of private data throughout the specification. Accordingly, Applicants respectfully submit that Allen fails to disclose or suggest an active single resource set modifying private data.

Insofar as Allen does not disclose an *active single resource set modifying private data*, Applicants respectfully submit that the Allen reference fails to disclose or suggest the elements of claim 94. Thus, in summary, Applicants respectfully submit that Allen fails to disclose or

suggest each and every claim element of, e.g., rejected claim 94. Therefore, for at least the foregoing reasons, it is respectfully requested that the Examiner withdraw rejection of claim 94.

Applicants note that claims 95-99 depend from patentable base claim 94. Accordingly, in addition to any independent bases for patentability, Applicants respectfully submit that claims 95-99 are patentable over the cited references by virtue of at least this dependence. Thus, Applicants respectfully request that the 35 U.S.C. 103(a) rejection of claims 95-99 be withdrawn.

Conclusion

For at least the foregoing reasons, Applicants respectfully submit that claims 1-99 are in condition for allowance and such action is earnestly solicited. ***The Examiner is respectfully requested to contact the undersigned by telephone if it is believed that such contact would further the examination of the present application.***

Please note that the attorney docket number has changed to P10424.

Please charge any shortages and credit any overcharges to our Deposit Account number 50-0221.

Respectfully submitted,
Ashwani Garg. et al.

Date: Feb. 5, 2004 by: Ted Crawford

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